

**IN THE CLAIMS:**

1. (Currently Amended) A metal halide lamp comprising an arc tube that includes:

a pair of electrode structures, each of which has an electrode at a tip;

a main tube part made of sintered polycrystalline alumina ceramic having magnesium oxide of 200 ppm or below, and containing a discharge space in which the electrodes 5 of the electrode structures are located to oppose each other; and

a pair of thin tube parts that connect from the main tube part and are sealed by respective sealing members with the electrode structures inserted therein, wherein

10  $20 \leq WL \leq 50$ ,  $EL/Di \geq 2.0$ , and  $0.5 \leq G \leq 1.5$  are satisfied, where tube wall loading of the arc tube is  $WL(W/cm^2)$ , a distance between the electrodes is  $EL(mm)$ , an inner diameter of the main tube part is  $Di(mm)$ , and [[a]] an average crystal grain diameter of the sintered polycrystalline alumina ceramic is  $G(\mu m)$ .

2. (Cancelled)

3. (Original) The metal halide lamp of Claim 1, wherein

the inner diameter  $Di(mm)$  of the main tube part satisfies  $2.0 \leq Di \leq 10.0$ .

4. (Cancelled)

5. (Original) The metal halide lamp of Claim 1, wherein

the polycrystalline alumina ceramic has transmittance of 94% or more.

6. (Currently Amended) A metal halide lamp comprising an arc tube that includes:
  - a pair of electrode structures, each of which has an electrode at a tip;
  - a main tube part made of sintered polycrystalline alumina ceramic having magnesium oxide in a range of 1 ppm to 200 ppm wherein a uniform grain dimension is provided, and containing a discharge space in which the electrodes of the electrode structures are located to oppose each other; and
    - a pair of thin tube parts that connect from the main tube part and are sealed by respective sealing members with the electrode structures inserted therein, wherein
$$20 \leq WL \leq 50, EL/Di \geq 2.0, \text{ and } 0.5 \leq G \leq 1.5$$
 are satisfied, where tube wall loading of the arc tube is  $WL(W/cm^2)$ , a distance between the electrodes is  $EL(mm)$ , an inner diameter of the main tube part is  $Di(mm)$ , and [[a]] an average crystal grain diameter of the sintered polycrystalline alumina ceramic is  $G(\mu m)$ .
7. (Cancelled)
8. (Previously Presented) The metal halide lamp of Claim 6, wherein the inner diameter  $Di(mm)$  of the main tube part satisfies  $2.0 \leq Di \leq 10.0$ .
9. (Currently Amended) The metal halide lamp of Claim [[1]] 6, wherein the polycrystalline alumina ceramic has transmittance of 94% or more.